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NATURE AND HUMAN NATURE

THE time-honored scholastic definition of man as *animal rationale* has nowadays given place to a zoological classification which sets him in the order of primates along with the lemurs, monkeys, and anthropoid apes. The anthropoid apes, or *simiidæ*, are, of all these cognate types, closest in structure to the human family, the *homonidæ:* they are tailless, like man; their four limbs are hands and feet, even though their feet are more like hands and their hands less perfect than the human; they are accustomed to a semi-erect posture, and in general their anatomical structure is homologous with that of man. Most striking is the analogy in form, complexity, and function of the ape-brain and the human. True, there is a chasm separating the ape-brain from the human in the matter of size; but the difference in size between the brains of the apes and the monkeys is greater than that between the brains of men and those of the apes, and again the difference in weight between the heaviest and the lightest human brains is little less than that between the latter and the heaviest brains of the apes.

Most of the anatomical differences between man and the apes may be ascribed to the fact that the apes are specialized for arboreal life, whereas in man the flattened foot, the straighter limbs, the sigmoid flexure of the spine, are all traits associated with the erect posture, and all seemingly essential to a walking ape. Very likely we may count as consequences of this difference of habit the nervous alertness—the bodily wakefulness and tension—which the delicate balance of the upright posture is bound to call forth, and also the profound development of the gregarious instinct which the face-to-face attitude invites,—for we have only to reflect upon the part taken by play of expression in our daily intercourse to realize that man owes wondrously to this his human comradeship, and so his whole social evolution. Nevertheless, from the point of view of mere structure, it is the difference in brain alone which justifies the separation of the *homonidæ* from the *simiidæ*, and there is little doubt that this structural difference would be of small moment were it not interpreted by far vaster differences of function.

The zoological definition of man, thus, brings us back to the scholastic formula for its decisive differentia: Man is *the* "rational" animal; it is his reason alone that conclusively separates him from the rest of the animal kingdom. But reason is a functional rather than a structural endowment; it appears only in conduct, never in organization. Here we are abruptly brought to face with an anomaly and a problem. The anomaly is that what is essential in human nature must be judged by criteria which are different from those that we employ in judging animal nature. The problem is the relation of a mind, which we judge according to its own distinctive laws, to a body, which we assort with the general world of animality.

Without doubt this problem is in large part set by the phylogenetic implications of our biological systems. When the zoologist classes the *homonidæ* and *simiidæ* as families of the same order, he is not merely pointing to morphological resemblances, he is pointing beyond this outer cousinship to the inward one of common descent: men and apes are of one blood, however remote the ancestry from which both spring. This is now a fact of common acceptance, and it is the one fact which has brought into vivid relief the discrepancy of the structural and functional relationships of human nature. From the standpoint of zoology we are constrained to assume a spiritual as well as a physical relationship with the life whence our bodies are derived. Yet, as we have seen, sober reflection does not permit even the biologist to place man actually in so close a connection with the inferior animals as his mere physical structure legitimately demands. The immense distance of the human from the animal mind, of the human from animal achievement, is a fact too glaring to be glozed over; and so we are driven to the observed inconsistency of making man unique, not through what he is physically, but through what he does spiritually. To be sure, stress is structurally laid upon skull form and brain size; but this may fairly be claimed as mere convention, for the size of the brain is in itself meaningless; its whole significance springing from the fact that it is a symbol of intelligence, denoting man's one essential differentia, his human mind.

We are thus driven into a troublesome dualism in our view of the human constitution. We can not content ourselves with the mere statement of the genetic relationship of our bodies to the bodies of the brutes, because of our keen awareness of the gap between brute and human mind. We can not rest satisfied with the traditional characterization of the human as the rational because it fails to give due recognition to our kinship with minds less than human. And so we are left with the psychological problem of the relationship of body and mind set for the huger area of life-history, with all its puzzles and antinomies accentuated.

Doubtless whatever solution there is to be must be a metaphysical solution. The foundation of metaphysics is the analysis of mind, and there, if anywhere, the clues to our maze must be sought. It is worth while to point to the one proffered redemption of the plot which is appealing widely to men's minds,—I mean Henri Bergson's philosophy of creative evolution.

Briefly, Bergson's philosophy sees in the world a dualism of living and dead, mind and matter. It is a dualism curiously analogous to Plato's, only it is a kind of inverted Platonism. For while Plato, like Bergson, identified matter with the dead and mind with the living, it was to this living mind that Plato ascribed all that we call form, idea, law, order, whereas for Bergson form is the very seal and token of material death. Form for Bergson is the mind's contemplation of its own corpse; form is retrospect, senescence, decay, the limitation of function, the suffocation of life. But life itself and mind itself are something other; they are names for the creative energy of the universe, which can only be described as a vital impulse and can only be felt as an intuition. In the history of the universe this vital impulse has held a various course. It has burrowed darkly, as from some cosmic womb, outward toward a goal of illumination which is not, and perchance never can be won. Its path is epitaphed with failures. In the vegetable world it is sunk in torpor. In animal instinct it is blinded as with a sudden and fatuous hope,—for instinct rests its efficiency upon highly specialized structure, and specialized structure means life self-immured; instinct is the tomb of the vital impulse. Finally, in our human reason, a window is opened upon the past; we see the array of dead forms with which the course of the life-impulse is laid out, our own bodies amongst the others, and from this we draw our general chart of physical limitations. But we have yet to reckon with what is most distinctively human of all—that bright intuition of life, which, building upon reason, as reason has built upon instinct and instinct upon vegetable torpor, creates in man an inner and ineradicable conviction of the surmountableness of death. The figure which this conception of Bergson's suggests is that of the poet Dante borne aloft by the swift spirit of Beatrice: his mortal eyes are so blinded by the splendors above that he turns for refreshened sight to the clear-cut forms and charted courses of the spheres beneath; yet the impulse which is the truth of his spiritual life is that "concreate and perpetual thirst for the deiform realm" which bears him up with a velocity that is the motion of the cosmos itself. And here again Bergson recalls Plato, for surely that dazzling light of the other world which inspires him who has once seen it with an immortal longing, surely with Plato this is more than the light of reason;

rather it is that insight into eternal beauty which is the intuition of life.

Whatever be one's opinion as to the evidences upon which Bergson's theory rests, there is no disputing that it brings into sudden clarity what before was gropingly dark. Man's body and mind are seen no longer as the self-contradiction of one nature, but now as the inevitable reflection of nature's own dualism. The essence of the physical must lie in accomplished history, of the psychical in unresolved futurity,—and hence the twofold definition of man: in the physical realm it consists in his body's dissection, in morphological analogies and anatomical relationships; in the psychical it is resolved into a statement of the human function of life.

Undoubtedly, too, this solution is given an added plausibility by Bergson's conviction that evolution proceeds through mutations rather than by infinitesimal variations. It is a relief to be freed from the illusion of the infinitesimal, the effort to answer the problem of change by focusing it beyond the reach of our powers of discrimination. The old saying that nature makes no leaps is challengingly denied; and, indeed, when we pause to reflect upon what comes to us in daily experience, before it is arranged and graded by reflection, we will be the more readily convinced that in nature all progress is saltatory. Which truth—if it be as fundamental as it seems—at once quiets our demand for a gradation of psychical life from brute to human,—even while the physical gradation is still called for by the retrospective and reflective nature of physical knowledge.

I am presenting this application not as a fiat advocacy of Bergson's philosophy, but as exemplifying therein the type of metaphysic which alone can supply us with a direct and satisfying statement of man's essential nature. We need only address ourselves with open eyes to the difference in degree between human and animal intelligence to see that this difference in degree is so huge as to constitute a difference in kind; and forthwith we are face to face with a more than zoological problem. Let us suppose, if we wish, that it was the happy chance of our human ancestor's choosing or being forced into other than an arboreal life which made of man a generalized rather than a specialized anthropoid,—even so, we have but given the condition that enabled nature's creation of human intelligence: the human mind itself is no augment of arborescent faculties, but a sudden and unpredictable mutation, whose explanation must lie in its functions rather than in its antecedents.

The crux of metaphysics, then, is to show the place and action of mind in nature. And in saying mind, we mean perforce the only mind that we can hope adequately to know—our human mind. The

development of thought must be the material of investigation, but the object of investigation will be that psychic structure which is shown in the ordering of this material. In speaking of structure here, it must not be assumed that we are falling back upon physical analogies; for as all mind exists only in mental operation, so is an analysis of mental structure essentially but an analysis of function. Our task is really such another as was Kant's, with the difference that the whole mental life of the race, rather than the experience of a typical mind, is our canvas.

It should not be inferred that this segregation of the metaphysical task constitutes a bias, or that an idealistic solution is covert in the statement of the problem. Such is surely not the case. All knowledge proceeds by first roughly blocking out areas of investigation; and here, it seems to me, our common phrases give us the rough chart. For we speak of nature and of human nature, each term designating a special province of human experience. Commonly the two are antagonistic. The world of nature is the world of the non-human and the anti-human. Most commonly it denotes that which is free from or beyond man's power and domination. The countryside as contrasted with the city, the virgin earth and the uncleft sea, the wildernesses of tropic deserts and arctic snows,—these are nature in the first intention of the term, while natural powers and forces are all such as transcend man-power; they are the physical forces of stellar movement, the chemical and alchemical forces which mold and remold man's little range of earthly crust, the secret springs of florescent life and iridescent decay,—all the tameless and uncanny borderland of human days. This we call nature, and over against it we set the familiar and congenial sphere of things human—the vantage of knowledge and sentiment and gregarious understanding which we call our wisdom. Human nature is our little islet of cosmos amidst the enveloping chaos of the unknown,—or, to change the figure, it is like a Roman castra temerariously planted far in the dark forests of the barbarians: squared and blocked and paved, all is orderliness and precision, while pale and foss fence it securely from prying eyes and hostile spears. So our human nature is set in the midst of engulfing outer nature. But we have learned the lesson of the Romans ill if we have not come to view this vantage of orderliness as a seat of growth and a center of conquest.

If, once and again, wearied with effort, we pine for a return to nature, we have but to try the experiment to discover that the return is no more than a marauder's raid. "Back to Nature" is illusion; what we mean by it is expansion rather than surrender of the human domain; it is a battle-cry rather than a spell of enchantment. The only progress we can know is a military progress under the banner

of our birthright; our only victory is the subduing of the brutish and barbarous environment of life to the rational and spiritual nature of man.

Perhaps this may seem to be the platform of a stout intellectualism. If it be so it rests upon no narrow interpretation of the intellect—which is not the brittle and crusty thing the casts and scours of thought are often assumed to imply. "Intelligence" is its fitter name, for "intelligence" seems better to connote that union of thought and feeling which we call sentiment, and which is the true index of the humanization of experience. Intelligence, sentiment,—this is the properest token of humanity, because it stands not only for clear-cut ideas, but also for their masterful assimilation through conduct; and apart from conduct all thought is illusory.

But no man acts to himself and no man lives to himself. The error of those biologists who sketch man in a scale with the apes is their consideration of him as an individual merely, whereas in what is characteristically human he is never this. No man is limited by his integument, nor can the human achievement be computed by physiology alone. The spiritual structure which we call culture, civilization, humanity, in its material as in its formal aspects, is the work of all men, and of men not as animals, but in their essential human quality. Only in a study of this work can we arrive at a true description of human nature—whence alone can be derived the chart of conduct and its inspiration.

And ought not the creation and growth, in the coarse body of nature, of a thing at once so wonderful and so exotic as human spirituality—ought not this give pause to our dogmatic assurance that graded continuities yield the whole pattern of reality? Human genius is not so patterned; human genius moves by bounding aspirations. And may it not be that human genius is symbolic of the better genius of the world itself, and our spiritual cosmos a stronger and more enduring reality than is the titanic physique of nature? "The distance from Earth to Sky," says Longinus, "is a measure, not so much of the stature of Strife, as of Homer himself."

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DISCUSSION

DR. STRONG ON "THE NATURE OF CONSCIOUSNESS"

RECENT realist theories of perception take as their starting-point the principle that our ordinary beliefs as to the nature, content, and locale of reality are false—they seem to regard this as unquestionable. The assumption is one that presents no difficulty to a

philosophy which, like the Berkeleyan, holds that the "materiality" of the objective world is unreal, or like the Kantian, that its reality is merely phenomenal, but it will be found to be a serious, if not a fatal, handicap to any system which regards itself as in any true sense of the word realistic; and this applies to the recent arguments for realism (valuable and significant as these are as evidence of a long-overdue reaction in philosophy) which have appeared in England over the names of Mr. Moore and Mr. Russell,[1] in America from the group of writers of "the new realism," and still more recently in Dr. Strong's paper on "The Nature of Consciousness";[2] and if the latter is here selected for the most direct criticism, it is only as a peg on which to hang remarks, and not because it has itself more serious defects than the arguments of the other writers.—It may be convenient to summarize their views, so far as these relate to the process and content of perception.—"The objects of human knowledge," said Berkeley, coolly begging the whole question at the very start of his argument, "are ideas"; the "objects of experience," said Kant, "are phenomenal"—"the truly real is transcendental to our experience." Both of these positions are repudiated by the writers named, who nevertheless agree that we do not immediately experience real objects; they denote what we do immediately experience by the terms "sense data" (Moore and Russell), or "images" (Strong). In spite of this, however, they go on to assert, we do "perceive" objects, which, again, are ~~real~~; and it is this distinction between what we immediately experience, *i. e.*, sense data or images which are not real objects,[3] and the real objects which we none the less perceive, which is the chief characteristic, and the fundamental defect, of these realist theories; upon this point the following criticism chiefly centers.

With the premises formulated by Dr. Strong (p. 593) all realists must agree; the question here raised is whether we are compelled to postulate, together with real objects, other entities having the characters of "sense data" or "images." To raise this point is not necessarily to question the existence of sensations as such. Dr. Strong seems to regard images and sensations as identical (p. 572). I should prefer to make a distinction between them, but I endeavor to use the term "images" strictly in the sense defined by Dr. Strong.

It is obvious that these theories are alike in being an attempt to deal with the problem presented by the conflict between appearance and reality, and it is also obvious that even if that problem be successfully solved, it is only at the cost of our being saddled with a

[1] "The Problems of Philosophy."

[2] This JOURNAL, Vol. IX., pages 533, 561, and 589.

[3] "Problems," page 23.

fresh problem equally difficult—that of the relation between what we immediately experience and what we perceive; between sense data or images and real objects; and it is further obvious that any such solution, even if true, is felt on the face of it as unsatisfactory, in so far as it still removes us from direct and intimate contact and relation with reality, which is (Russell) reached only by inference.[4] It throws a veil of illusive phenomenalism over everything with which we are in continual relation, and we feel instinctively, if unreasonably, that the only completely satisfactory philosophy is one which will find reality directly in what we see and feel and handle, which will justify our belief in an unmediated relation with the real world; and if we carry the idea into religion, with real Deity.

We may, of course, argue that such a philosophy, however desirable, is unattainable; but we are not entitled to assume this to begin with, and while it remains possible effectively to criticize theories involving the use of images and sense data, the way remains open for an advance to a more satisfactory realism in a truer sense of the word.

Dr. Strong deals directly with the relation between image and object, and what follows is mainly a criticism of his views on this point, and also of his remarks on the nature of consciousness in general. It may be hypercritical to point out that he himself is not quite consistent in the use of his terms; but in questions of this kind where we are seeking to ascertain the exact nature of certain processes and entities, it is essential that the terms chosen to denote these processes and entities should have clearly defined meanings assigned to them, and be used with those meanings and no other; otherwise we but substitute a new type of confusion for the original type. "Nor do we say," says Dr. Strong (p. 534), "that we are 'conscious' of the fire." But we have (p. 536), "a reader is less clearly conscious of his book." But Dr. Strong contends that "we are properly said to be conscious only of our own states of mind" (p. 534), and to this meaning he in the main adheres.

Turning to Dr. Strong's theory of images and their relation to objects, we find that he makes all the following assertions about them. (1) Images have form (rhomboidal or oval) and also color (p. 538). They are "plainly extended" (p. 563). (2) The image is not perceived (p. 538), but is essentially open to introspection (p. 572), *i. e.*, as distinct from perception. (3) It is "in perception," and "in experience" (p. 538),—more definitely it is "the part of the mind which enables it to contemplate" (p. 540); it is "a form of feeling" (p. 592) and a psychic existence (pp. 589 and 572). (4) Images are not parts of the object, but aspects or views of it (p. 543).

[4] "Problems," page 17.

(5) The object is *quite other than the image* (p. 544). (6) But none the less "the *object is fundamentally of the same nature* as the image, whatever that nature may prove to be" (p. 567).

How is it possible to reconcile these attributes and functions of the image? If we take (3) and (1) we have that a part of the mind has color and is extended, which can only mean that the mind is in part colored and extended; and (4) is, further, an aspect of the object. (5) and (6) directly contradict each other; or if we adhere to (6) alone, then *the object is a psychical existence,* since that (3) is the nature of the image; and the whole treatment is an excellent example of the philosophical quagmire which engulfs any realist who sets out by divesting the content with which we are in immediate contact of all objective, true, and final, reality.

We have a similar instance of looseness in the use of terms on page 563. We have seen that an image is not perceived (p. 538); what we perceive is an object. Thus we have precise meanings given to "image," "perceive," and "object"; but Dr. Strong introduces (p. 563) a term quite new to the discussion—"discover,"—with no attempt whatever to fix its meaning—"we discover the disc" (*i. e.,* image) "as certainly as we discover the moon" (*i. e.,* object). Hence we "discover" the object, and *ex hypothesi* we perceive the object; also we "discover" the image, and, *ex hypothesi,* we do not perceive the image; *i. e.,* we "discover" both what we perceive and what we do not perceive. What, then, is this doubly inclusive process of "discovery"? Is there any process possible other than perception of an object? If "discovery" be synonymous with perception, how can we "discover" the image? If it be not so synonymous, how can we "discover" the object? It is useless seeking to find the meaning of terms such as consciousness by using terms like "discover," whose meaning in itself is not already fixed and definite. If I say, "It is a brilliant day," and you reply (with Lewis Carroll), "Well scarcely brilliant, but certainly brillig," I might agree—if I know what you mean by "brillig"; so if you say, "we do not perceive the image—we 'discover' it ," again I might agree, if I know what you mean by discover.

From this account of the nature of images, we proceed to their function—the manner in which we obtain by their means our knowledge of objects—what Dr. Strong calls (p. 590) "cognition," in its form of sense perception; here the medium is the image. But "there is nothing in the image itself which points to an object" (p. 592). Cognition is a complex process in which the image plays only a part.

Briefly, Dr. Strong's theory may be put thus: (*a*) The image is at the center of the body—surrounded by the body (p. 596); more definitely "in the brain, held in position towards the

object by a set of definite physical relations''[5] (p. 597). (*b*) The qualities of the object, considered as existences, are in the image, from which they are "projected" on to the object, in which, in cognition, they appear (p. 598); but (p. 599) "that in the image which guides action is solely what has *come through to it* (the image) of the object"; which seems to mean that the qualities come to the image from the object, and are then projected back to the object! (*c*) Finally, "the image is pronounced to be in, if not to be, the object" (p. 599); this constitutes "projection." This projection of the image is a conferring of depth, which is not as such a character of the image (p. 599). The image with its motor promptings explains what we perceive (p. 600).

These are the main principles of Dr. Strong's theory of the function of "images." Can they be maintained conformably with Dr. Strong's other assertions?

(*a*) "The image is in the body[6] or the brain." This can be known only through introspection, which is our sole avenue to knowledge about images as such (pp. 534 and 572). But does the closest introspection give this verdict?

Take the most favorable case, that of the after-image of an intense light. This we know to be an image,—it is not an object in any degree. But it certainly does not appear to be in the body at all, not even to the degree in which a pin-prick appears to be in the body; it appears to be at a distance in space, exactly as does any undoubted object; and so does a very faint odor. It seems impossible to advance any evidence for this assertion, except the necessities of theory.

(*b*) A stock difficulty in realist theories of perception is (crudely stated), "How does the object get into, or before, the mind? How do these totally different entities come into relation with each other?" It is a difficult problem, and Dr. Strong scouts intuitionism as any solution (p. 597). But does his account of the process simplify the problem in the least? The object causes the rise of the image (p. 593), to which its characters pass through; then they are projected back upon or into the object. Each step in the process raises questions as difficult as any in the old stock problem, even if there were undoubted evidence for each of the stages; and this (*a*) we have already found questionable.

(*c*) "This projection of the image is, above all, a conferring of depth," *i. e.*, presumably, in the sense of objective, stereoscopic, solidity, both as regards real space and real objects. Dr. Strong

[5] That is, physical relations exist between psychical existences and physical bodies. Would any physicist accept this view at all?

[6] They must not be confounded with retinal images—sound, fragrance, cold, are "images" (page 538).

emphasizes this stage in the process; but how, on his own theory, is such a conferring of depth possible? On that theory, can an image not possessing depth acquire it? Depth is a quality of object, but not of images. Now the other spatial qualities of the object come through from it to the image (p. 599), both its shape and its size; why not, then, also, the more important quality—depth?

But suppose this view to be accepted—then the whole theory is in still worse case. We confer depth—we perceive space and objects as solid—as tridimensional; that is undoubted, however we may seek to explain it; but how, on Dr. Strong's theory, can we acquire the notion of depth at all? On that theory, images bring about perception in all its modes and content, and chiefly because the characters of the object pass through to the image. But depth does not; hence we can not get the notion of depth from the image; and what other source have we? We can not directly experience the object; our whole cognition of it springs from our experience of images; and therefore any character which images lack can only be the fabrication of our own subjective mental processes; no other alternative is conceivable. But Dr. Strong would not accept that view; and he shuts himself off from the only other possible alternative, and so falls into a dilemma which is fatal to his whole theory, so far as depth is concerned. In fact, his whole treatment of depth is peculiar. "It is something the mind grasps in cognition, not a feeling, as length and breadth" are (p. 572). Well, let us admit this, and imagine ourselves looking at a cube. We perceive it has length, breadth, and depth. *Ex hypothesi* the length and breadth are feeling; the depth is not. But turn the cube round through 90°; its former length and breadth are now its depth, and *vice versa, i. e.,* feelings are transformed into non-feelings, and *vice versa,* which is, perhaps, the most curious implication yet involved in the entire theory.

But "depth," after all, requires no such privileged consideration. For any realist system which accepts extension as real, depth is merely extension in any plane not parallel to the vertical plane in which lies the straight line joining the foveæ of the observer's eyes at the time of observation. How we come to perceive depth is certainly a problem; but the nature of depth itself presents little difficulty. In short, any realist theory based on "images" or on "sense data" is beset by a number of difficulties and contradictions inherent in the theory, and from which it can not be freed by any ingenuity in reasoning. But even if we accept the theory, even should it be proved to be well-founded in the facts of experience, we are no freer from the pressure of equally difficult problems. We should still be bound to ask:

How can we conceive objects to give rise to images? If we regard

object and image as being of the same fundamental nature (*i. e.*, psychical, since the image is so), we surrender realism; if not of the same fundamental nature, we simply raise under a new guise the old bugbear of philosophy, the passage from the physical to the psychical, without in any degree explaining it.

If images be psychical existents (with pleasures, pains, emotions, and desires) (p. 572) why do we, in the case of images, remain oblivious of them as images and become aware of objects? while at the same time we are exclusively aware of the other psychical existents, purely as such, with no reference whatever to objects of any kind. Something more seems necessary than a mere postulation of a "projective" function.

How do we become aware of the images at all? Dr. Strong says (p. 539): "One can point out fact after fact about the image;" similarly we can point out fact after fact about an object; and this Dr. Strong would explain by the image theory. But how are we to explain our ability to point out facts about the images themselves?—surely a problem of equal importance.

A more fundamental question is, how do we ascertain the characters of the object, *as distinct from the characters of the image?* and, especially, when the characters of both are identical. Mr. Russell says[7] "the real table must be an inference." What are the grounds of the inference, and what the details of the inferential process? Snow as object is white; so is the image by means of which I perceive it; but I *introspect* the whiteness of the image, while I *perceive* the whiteness of the snow,—both colors being, nevertheless, indistinguishable (as colors). Wherein consists the difference between the processes? Then again, I have a series of images whose forms are oval, circular, oval again; but the object, I say, is circular; why do I thus select the circular from the other forms of the image, and call it the form of the object? How and why do I distinguish the *perceived* circularity of the object from the *introspected* circularity of the image? What is the difference between them, as circles? If there be no difference, how distinguish between one as the shape of the object and the other as that of the image?

If it be replied, "But we never do experience an actual circle or a true square" (while nevertheless we *infer* circular and square objects) then the question becomes, "How, then, do we obtain the ideas of circle and square at all if we never experience them to begin with?"

Dr. Strong's paper is called "The Nature of Consciousness"; and here we find the crucial and fundamental defect of his views; "Many writers," he says (p. 533), "deny that consciousness exists,"

[7] "Problems," page 17.

but he himself would admit the existence of consciousness (*a*) as denoting the whole formed of "images or sensations with pleasures, pains, emotions, and desires" (p. 572), or (*b*) "as a special case of awareness—the awareness of the states of mind" (p. 534), or as it is expressed (p. 589), (*a*) consciousness as "feeling," (*b*) consciousness as "awareness"; awareness being then defined as "bare knowledge of acquaintance." But these two views of the nature of consciousness are quite irreconcilable with each other—we can not hold both, even if we can hold one of them. As (*a*), consciousness is a content—a totality—a series; as (*b*), it is our relation to this content or totality, whatever term we may choose to denote this relation—whether "awareness" or some other term. That will not alter the fact that it is impossible for consciousness to be both a content and also our relation to that content,—the two are absolutely different from each other, and we can not use the same term to denote both. If we use consciousness to denote the one, we must find some other term to denote the other. Dr. Strong must make his own choice, but he can not hold the two meanings as alternatives.

This leads to the fundamental defect in Dr. Strong's view of consciousness. We must, of course, admit the existence of a totality, a series, of sensations, pains, pleasures, and emotions; and we are at liberty to use the word "consciousness" to denote this totality if we choose; but that leaves absolutely untouched the essential and final problem of philosophy, so far, *i. e.*, as philosophy is concerned with perception and epistemology in general. That final problem is: "What is the nature of our relation to this content, and also to the other contents of which we are aware—objects, conceptions, and volitions? and how does this relation come into being?"

Dr. Strong's theory seems to contribute little to the elucidation of this problem; to adhere to the definition of consciousness as a content is to neglect the question, "How do we become aware of this content?" and, on the other hand, the theory of images and sense data in itself is so full of inconsistencies and difficulties as to do little, if anything, to simplify the problem, and even were it completely adequate to account for consciousness in its second meaning of awareness, the limited definition of awareness adopted (p. 589) would render it applicable to only a part of the whole problem.

In fact, it appears hopeless to construct any realistic theory of perception and knowledge by having recourse to sense data or images, regarded as being the content with which we are in direct contact, and at the same time as not identical with real objects, but as a sort of *tertium quid* between the knower and the real objective world, or in the relation of a photograph to its original (p. 561). The parts which sensations, percept, and object play in the process of knowing

still require accurate elucidation; but the principles upon which a sound realism must approach the question seem capable of being determined. No realism will be finally satisfactory which excludes objective reality from *all* with which we are in immediate relation, and assigns it to a region which we can reach only by inference or other indirect process. Nor does it seem impossible to assert that part, at least, of that with which the knower comes into direct and immediate relation is itself the objectively and finally real.

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CONCEPTS AND EXISTENCE

PROFESSOR PITKIN'S clear and excellent article on "The Empirical Status of Geometrical Concepts"[1] introduces a theme of exceptional interest, and is a helpful contribution to its discussion. Instead of torturing possible minor points of difference, I much prefer to recognize a substantial measure of agreement, and to follow up in a casual way the line of suggestion that Professor Pitkin has initiated.

Mathematics has been quite long enough the ally of poetic and flesh-averting metaphysics. The claim that the propositions and concepts of geometry are blessed *νούμενα*, noused things, having nothing to do with sensed things, except the task of redeeming them, has been growing quietly antiquated. Nevertheless, a certain mystery remained. It is well, certainly, to fill up the gulf between noused things and sensed things on the side of perceptibility, but this, I fear, will not pacify the unhappy ghost, for what I may call the despiritualization of geometry suggests that the real problem is that of the existential status of universals. If mathematics has had many a message for theology, has it not one now for realism? Let the noused things be not exclusively *νούμενα*, but let them be also, or at least some of them, sensed things; the more important, the originally Platonic, distinction remains, the distinction, namely, between a universal and an individual.

The history of philosophy shows nothing more curiously characteristic than the determination, century after century, to minimize the authority of sense-perception, and nothing is more readily intelligible than this apparent perversity. Any one who seeks to prove that the things we empirically observe are not "really" what we empirically observe them to be, must begin by discrediting our natural organs of observation. The spirit of apologetics, conscious or unconscious, that has inspired so much of European philosophy demands the faith that eyes and ears are bad witnesses. If I would have you believe that the

[1] This JOURNAL, Vol. X, page 393.

horn of an automobile is the flute of Marsyas or the lyre of Apollo, I must show you that our hearing is finite and committed to error. Plato had his own reasons, no doubt, for identifying the one and the many with the invisible and the visible, respectively, but the exaltation of what eludes perception in Plato's case and in the case of supernaturalism generally is no mystery. The philosophy of other-worldliness must needs be dialectical; it could not possibly be empirical. Geometry is also dialectical and the philosophy of it has been attracted to other-worldliness somewhat as words in Latin syntax are attracted into cases where they do not naturally belong. The point to notice, however, is that what gives to concepts their peculiar unity is not the circumstance that they are invisible, but the fact that they are *illustrated* to perception, as Professor Pitkin so well shows, as often as we assemble the material conditions that conform to what the definitions prescribe. Whenever we do so, however, the perceived object includes not less, but more than the definition. We can never see merely the concepts; the ridge of a distant roof seen against the sky may, to be sure, conform to the requirements of a straight line. So may the edges of many other things, and we can say without being misunderstood that we see a dozen instances of straight line or a dozen straight lines. The latter would probably be the more natural way of putting it; we should never, for instance, in natural conversation, say, "I see a dozen specimens of the genus horse": We should say, "I see a dozen horses." But whether it be straight lines or horses, what we observe is a repeating character. We certainly perceive individuals which are like one another in certain respects and different in others. Each individual comprises what we may call essence and accident, and I feel pretty confident that without the accident the essence will forever elude perception.

Let the accident be the orange color of a roof otherwise red, in the light of a sunset. We may say it is the same as the color of a certain silk dress, or we may suddenly realize that it is just the color we want for some decorative purpose, and we may set out to match it. We are not, I suppose, seeking to duplicate a roof that looks thus and so under certain atmospheric conditions; we are using a natural power in a natural way, the power to prefer and to select. And we might, in the same way, select, *i. e.*, abstract, any other single feature that we can distinguish, such as a straight edge. Both the color, however, and the line, might have been discovered in different company, that is, the particular color is as unessential to the line as the line is to the color; each is accident with respect to the other. But each can be discovered by perception only in conjunction with *some* other. Now for those who have ceased to look to logic for the miracle of creation, and who admit that "eyes and ears," though leaving much

to be desired, are all the witnesses we have as to what exists, and how, there will be no occasion to deny either of two things: first, that any specimen of existence is as complex as we observe it to be, and perhaps much more so; and secondly, that we can notice and isolate any single feature of a thing or things, making, thereby, an idea. Having selected it, its empirical company becomes material accident; its own concrete empirical status is irrelevant to the content of the selected abstraction; but are not the details of this empirical status, speaking somewhat awkwardly, the conditions of existence in the specific case? May we not say, and would it not be a truism, that existence is the empirical fund of accident which gives a selected property its empirical status?

One of the many good things Professor Bergson has said is that an idea becomes clear by being used. And the adequate definition of a straight line used by geometers is one that has been gradually reached. Is it likely that such a definition results from the desire to state what we see when we see a straight edge, or is the definition something to be used in geometrical operations, and something, the content of which has reference to its geometrical business?

Some confusion may lurk in the term "definition of a line." In geometry, the line *is* the definition, although in architecture it is a straight edge of structural matter. We speak of the plan of the roof, the lines of the roof, the system of lines, etc., but what is a definition doing with the preposition *of*? The selected property *of* a thing becomes an instrument in geometrical operations. Being made an idea, through separation from its existential accidents, and being handled as an instrument in certain technical operations, it is now defined in terms of its implications, for how else should any instrument be conceived?

It is not necessary to lay stress upon the instrumental character of geometrical concepts. I am chiefly interested in recalling that old-fashioned property of all concepts, their universal character as contrasted with the individual character of any particular incorporation. And yet, might we not expect that geometrical concepts would appear in a very different light to the one who pursues the path of research and discovery from what it does to the one who learns and perhaps teaches the mathematical conclusions of others? In other words, research and exposition, or discovery and demonstration, are two very different things. During research concepts are flexible, subject to the emphasis that the particular problems suggest. After the satisfactory termination of a particular inquiry, the concepts concerned are necessarily precise. Thus all those who are not original investigators easily get the impression of finality, an impression which those that make the science in question to progress are probably far from sharing.

In the presence of philosophical mysteries that have become classical it is frequently worth while to ask what the universe of discourse was in which a problem first appeared. The distinction between noused things and sensed things declared to involve permanence and unity for the one and mutability and multiplicity for the other, arose, as every one knows, as part of an argument for teleology. In this universe of discourse descriptions in terms of "the one and the many" are quite simple and intelligible. When, however, we abandon teleology, and carry the distinction over into the region of mere existence or fact, we may be *doing* something in an entirely proper way, but when we come to philosophize about it, we should begin by remembering what we have done.

Any one may, if he likes, marvel at the fact that nature so endlessly repeats itself. The repeating facts are what Poincaré has called the subject matter of science, and naturally enough, since it is only the fact that things happen again and can be made to happen again that makes it possible to understand how particular things happen. It is nature's repeating aspect that makes it possible to distinguish between the right way and the wrong way of doing anything, that makes it possible to learn anything by experience, that makes memory of any use and intelligence conceivable. Plant the best laboratory imaginable in a world where nothing ever happens as it has happened before; the laboratory will return to its ancestral dust before its occupants discover anything except the futility of research. Fortunately, however, we live in a world where an habitual behavior of things can be learned. We can diagnose situations more or less successfully according to our measure of acquaintance with the factors that contribute to make them. The repeating processes are equally well characterized whether we call them laws of God or laws of nature. Every repeating process, or that which is repeated, the repeating character, is a "one" established in nature, not a teleological "one," to be sure, but the type of "one" that underlies all actual purposive and reasonable behavior, as well as all scientific description. Here we have two types of "one," the "ones," the repeats that we discover in nature, and the "ones," the purposes of any one knowing and depending upon the former. The "ones" of the second or value class are, in a loose sense, functions of the "ones" of the first or the nature class, and the two classes may be symbolized by I_V and I_N, respectively. Now the type that the platonic philosophy was concerned with was I_V. As Santayana so well says, "Plato had no physics and the physics of Aristotle was false,"—false because Aristotle identified teleologically I_N with I_V. The tradition that concepts are noused and not sensed comes from a philosophy that made that proposition originally about I_V. It did not make it about such a

property as is common to the line of the horizon (if we don't look at too much of it) and the flight of a bee. The singleness of direction is in each case a perceived property, no doubt; it is I_N. But now, isolating this property, and wishing to make it a feature of architectural constructions, how shall we describe it? It will not help us to say a straight line is a bee line. We must describe it after the *if—then* fashion. In any case we seek a formula, a concept for bringing a straight line into existence. When we have done so, we have another object which repeats the property common to the horizon and the bee's flight, and we can say that the formula for singleness of direction in the measurement of plane surfaces describes also the singleness of the bee's direction. Is there, however, no difference between the formula of a railroad curve and the curve of the track when laid down? It would be a little unusual to say we perceive the curve of a track that doesn't yet exist. The curve is, meanwhile, the plan of the engineer in charge of construction; it is an I_V.

Can this I_V be presented to perception? No doubt. We can load it with the necessary existential accidents. We can produce an individual according to its specifications.

This brings us back again to the emphasis upon universal and individual. If I_V is to be presented to perception at all it must be by virtue of *some* sort of construction or of natural process. If we are to construct a formula of the *if—then* type to describe the universal, must it not be one according to which the existential accidents must be distributed if they are to embody and render perceivable the concept in question? Must it not, *i. e.*, be a formula for construction, construction which may, of course, never be carried out?

To sum up: the concept is always less than what is perceived. As a selected property, existential specifications are irrelevant to it. If it happens to become an instrument useful in some particular class of operations, it will, as such, certainly be defined in terms of its implications, in terms of the *if—then* relation, and its status becomes dialectical. But that which now appears in a definition reached after many years of highly expert use is surely a different thing from the straight edge of a particular object. Rules for construction need not be identical with empirical descriptions of what is beheld after construction.

The ancient distinction between noused things and sensed things can not be made quite to disappear. It continues to be simple and intelligible in the universe of discourse that originally produced it. That which shall exist, though it does not yet do so, is invisible for the good reason that it does not yet exist.

The teleologist is under a dialectical obligation to say that his concepts are primarily noused things and not sensed things. The realist,

if he banish empirical teleology from his universe of discourse would seem to be under an equally dialectical necessity of saying just the reverse.

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REVIEWS AND ABSTRACTS OF LITERATURE

The Fitness of the Environment: An Inquiry into the Biological Significance of the Properties of Matter. LAWRENCE J. HENDERSON. New York: The Macmillan Company. 1913. Pp. xi + 317.

"To what extent do the characteristics of matter and energy and the cosmic processes favor the existence of mechanisms which must be complex, highly regulated, and provided with suitable matter and energy as food? If it shall appear that the fitness of the environment to fulfill these demands of life is great, we may then ask whether it is so great that we can not reasonably assume it to be accidental, and finally we may inquire what manner of law is capable of explaining such fitness of the very nature of things" (p. 37). This is Professor Henderson's statement of his problem. The origin of the problem in the author's mind was the connection between physical and chemical properties of simple substances, and the organic functions which they serve. The key to the peculiar conditions of equilibrium between acids and bases in blood and protoplasm is to be found in certain characteristics of phosphate solutions and of similar solutions containing carbonic acid. Of all known substances, phosphoric acid and carbonic acid possess the greatest power of automatic regulation of neutrality.

"One does not like to accept a fact of such far-reaching importance as mere chance, and yet no other explanation was at hand. . . . Natural selection could not be involved. . . . But . . . this is no unique instance of a property of a simple substance automatically serving a very useful purpose in the processes of life.

"Then . . . came the realization of the reciprocal character of Darwinian fitness, and at once the whole difficulty was resolved."

After two chapters, one on "Fitness," the other on "The Environment," in which the nature of the problem and the proposed solution are discussed, the book takes a view of the essential physical and chemical constitution of the universe considered in its aspect as environment of life; this on the one hand; and, on the other, postulating certain essential characteristics of life, it interprets the mutuality of the fact of fitness between environment and life as genuine reciprocity or essential coimplication between them. The characteristics of life which are singled out as useful for the argument and at the same time as fundamental are these: life is a physico-chemical mechanism essentially complex in structure and function, durable (and therefore regular and regularly conditioned) and active (metabolic) (pp. 31, 32).

The physico-chemical characteristics of water, carbonic acid, and the

carbon compounds are taken up one by one and their absolute and relative magnitudes considered. The possible utility of such properties is then estimated. Finally, the various favorable qualities of water, carbonic acid, and the carbon compounds are grouped together to see if they constitute a unique *ensemble* of fitness, among all possible substances, for a living organism. This evidence, in the main, constitutes Chapters III., IV., V., and VI. Chapter VII. concisely analyzes and summarizes the evidence, and the last chapter, Chapter VIII., entitled "Life and the Cosmos," draws the author's metaphysical conclusions concerning the nature of the evolutionary process, with discussions of vitalism and Bergson's evolutionism.

The wonder of life's mastery of its conditions seems, to those who have best expressed themselves about it, to consist essentially in the incredible ingenuity either of life itself or of an artificer who could have preestablished such an infinitely complex and admirable fitness between life and its conditions. Certainly life, even in lower forms, does not merely conform to its conditions, as in the development of cunningly suitable anatomy; the mastery includes more lordly methods, the reforming of conditions to suit life. But no matter—the wonder in both cases alike is the infinite ingenuity manifested; for even in bridling nature the successfulness of it always corresponds exactly to the degree of insight into nature. Life stoops, in this sense, even to conquer. Whether the miracle comes to one emotionally, as it comes to the blessed children of Kipling's and of Stevenson's creation, who cry, "The world is so full of a number of things, I'm sure we should all be as happy as kings," and exult in the provision by good Mother Nature for such diverse wants of so many creatures; or whether the miracle engages the intellect rather, the miraculous thing is always the intricacy of the correspondence between life and its conditions.

Henderson, like Bergson, conceives that this marvel gets its marvelousness from a false way of distinguishing between life and its conditions. Life's actual taking form in living beings,—in other words, the fact of organization—as Bergson shows, has a difference from manufacture (of a machine, for instance), a difference which takes from biological fitness all ingenuity, even of a Creator. For a manufacturing Creator were ingenious (as Mother Nature is regarded by the Kipling nurse in the song) only if God, like Mother Nature, is supposed to *make* things, to build them. "... The creation of the visual apparatus is no more explained by the assembling of its anatomic elements than the digging of a canal could be explained by the heaping-up of the earth which might have formed its banks. . . . When we wonder at the marvelous structure of an instrument such as the eye, at the bottom of our wondering is always this idea, that it would have been possible for *a part only* of this coordination to have been realized, that the complete realization is a kind of special favor. . . . We see something positive in this coordination, and consequently something fractionable in its cause,—something which admits of every possible degree of achievement. In reality, the cause, though more or less intense, can not produce its effect except in one piece, and completely finished. According as it goes further in the direction of vision, it" [produces a more complex structure]. "For the form of the

organ only expresses the degree in which the exercise of the function has been obtained." [1]

Bergson's conception of the meaning of structural determination is that it is an expression or translation in negative or inverse, of function. But he vacillates, with confusing results, between a reciprocity of two mutually alien orders of energy (life and inert matter), on the one hand, and the denial of matter, on the other. Henderson's use of the conception of reciprocity is clearer. If life and matter are mutual inversions, the relationship is a mystery, on Bergson's principles, a mystery of the vicious, hopeless sort which is neither original nor analogical—it is not ultimate, yet is has no leading for thought. It is either the Platonic interactiveness between being and non-being, or else it is the Cartesian irreducible dualism whose discovery is due to the necessity of reducing it. Henderson's idea is that, in metabolism, we have not two principles (one real and the other unreal, according to Bergson!) one of which, positive reality, life, impresses itself upon, or expresses itself by means of, the other, inert matter; the manifestations of energy are not independent of each other. Energy is one. The properties of matter, and the course of cosmic evolution, are so intimately related to the structure of the living being and to its activities that the whole evolutionary process, both cosmic and organic, is one, and the biologist may rightly regard the universe in its very essence as biocentric. This implies not only that one may learn the true nature of the universe from the biological point of view, as the environment fit for life, as well as learn the true nature of the organism from the evolutionary point of view as the agent fitted to exploit its environment; it implies a profounder idea, namely, that a teleological tendency works steadily through the whole process of evolution, a tendency at the very origin of things, a necessary associate of mechanism. Matter and energy have an original property, assuredly not by chance, which *organizes* the universe.

I say this is preferable to Bergson's conception of evolutionary process because whatever dualism it involves, between matter and purpose, is an aspective and not an ontological dualism. If it is a mystery that teleology should be a "necessary associate" of mechanism, it is an *original* mystery, precisely like the mystery that the east is a necessary associate of the west. It means that, when you contemplate the nature of the concept "mechanism" or of the concept "teleology," with thoroughgoing, persistent attention to its necessary implications, you find in each the other necessarily implied, as you find the east necessarily implied in what you mean by the west.

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The Masters of Modern French Criticism. IRVING BABBITT. Boston and New York: Houghton Mifflin Company. 1912. Pp. xi + 427.

This is a dignified and important book, and deserves a high welcome: all the more when we contrast its style, its interest in ideas, and its width

[1] Bergson's "Creative Evolution," pages 93–96.

of outlook with the literary studies that usually proceed from American universities. Here is a book without that preoccupation with scraps of texts and philological fragments, that crass dullness and imperviousness to ideas on the one hand, or that crude journalistic spirit, not even deserving the title of dilettantism in any noble sense, on the other hand, which have for the most part characterized the work that has come from our institutions of higher learning. I am thinking, of course, more especially of the field of "modern languages" in its academic sense, in which it might almost be said that no work of creative scholarship has been accomplished since the days of Child and Ticknor. In an age when, as Sainte-Beuve said, "it seems that to edit an old book already published, or to print some insignificant scrap for the first time, is a more serious claim to esteem than to have a style and ideas," it is particularly fitting to give a cordial welcome to a book which displays an interest in style and which makes a valiant effort to grapple with ideas.

If we were to sum up the book in a phrase, we should say that in it Brunetière speaks English. A nature so essentially French as Brunetière's could not use another tongue without altering its temperament in some measure; and Professor Babbitt, it is only fair to say, exhibits the divergence that such a "sea change" imposes on him. But it is the tradition of French academic criticism that speaks throughout the book. The very critics selected are those that Brunetière himself would have selected as masters of his own art in his own country; the method of dealing with them is the method fixed, as it were, by him; the wailing cry for lost traditions, for old standards, for set *genres,* is unmistakably his. In both Brunetière and his American disciple we have the same confused dualism which attacks scientific positivism in literature and which in the very same breath defends the wholly positivistic theory of the literary *genre.* Both are moralists, controversialists, pamphleteers, rather than literary critics; both exhibit the same suspicion of the imagination on its purely creative side.

Take, for instance, Professor Babbitt's essay on Scherer. The reader will search in vain for a single allusion to literature or art, to the life of the imagination in any of its forms. He will find, instead, extended summaries of Scherer's views on relativity and the absolute, on progress and humanity, on Hegel and Napoleon. I have no fault to find with these admirable paraphrases of an author's thought on subjects that concern men at so many points, and merely express a naïve wonder at a theory of literary criticism that can be so inclusive as to find an interest in every subject under the sun except imaginative literature.

In the two chapters on Sainte-Beuve, we might expect to find other preoccupations. Here indeed, we say, criticism will find and express itself; contact with this delicate and masterly spirit will encourage and inspire an attitude more purely esthetic. But what do we actually find? It is the author's theory that the relationship of a great writer with his literary predecessors has little or no bearing on his own peculiar genius; yet here we find the most minute analysis of Sainte-Beuve's relations to his spiritual predecessors, to La Bruyère, La Rochefoucauld, Bayle,

Horace, Montaigne, Vinet, and the rest. Professor Babbitt is constantly protesting against the tendency of criticism in "ceasing to be literary and becoming historical and biographical and scientific"; yet here we find the emphasis wholly laid on Sainte-Beuve's relation to his time, to romanticists and naturalists, to anything and everything, in a word, except his own peculiar art as a critic of literature. His actual criticism of any poet, novelist, or other writer is passed over lightly with the quotation of an *obiter dictum* or an epigram; there is no attempt to analyze a single essay of the greatest critic with whom this book has to deal.

We assume that this is what our author means when he tells us in his preface that he has not tried "to criticize criticism, at best a somewhat languid business, but to criticize critics, which may be a far more legitimate task." But what is it fair to ask of an essay on any great literary critic? His theories of Hegel and Napoleon, of progress and humanity, or his successes and failures in understanding and interpreting the great writers? May we not ask to have questions like these answered for us: How has he done his work; how has he made us understand the greatness of a great book or see the littleness of a little one; what do art and criticism mean for him? But we might read these two chapters on Sainte-Beuve from start to finish without knowing the art of a single one of his own essays, his method of approaching a single author concretely, his genius in unraveling the difficult tangles of another man's genius. For this task of criticizing critics there is needed the same insight, critical insight, as in the original operation of the critic in criticizing poets and novelists; and the fact is that Professor Babbitt is entirely lacking in this insight. He is a defender of tradition, an historian of ideas and tendencies, a moralist, a popularizer of general ideas: anything and everything, in fact, except a critic or a student of criticism.

His book suffers also in another way, from the lack of a unified attitude toward his central theme. The fact is that Professor Babbitt has no esthetic theory. He has much sensible advice to give on questions of critical practise: that criticism to-day needs standards, that judgment and selection must be added to taste, that tradition and the classics need more attention, that scientific positivism must be destroyed, that critical appreciation must be curbed this side of "superlativism." These he espouses with a masculine eloquence worthy of the best traditions of academic criticism. But to the questions—What is art? What is literature? What is criticism?—he offers no answers; and he has no answer for the very simple reason that he has never asked himself any of these questions. His utterances are controlled, not by any unified or consistent thought in the field of esthetics or critical theory, but by his personal bias in respect to the practical needs of the culture of to-day. In fine, if we might give the book the extended title which was common in works of its kind in the seventeenth century, it would read somewhat after this fashion: "A Discourse on the Intellectual and Literary Troubles of Our Times: In the form of a running comment on certain modern French critics; Together with a discussion of the

various confusions of thought current in our day; To which the author has added some of his own."

The volume concludes with a valuable list of modern French critics and their works, which makes no pretensions to completeness, and which omits names of more or less importance such as Feugère, Monselet, Fromentin, Marc Monnier, Ganderax, Girardin, Rio, Séailles, Hello, Boissanade, Dubois, Demogeot, Spronck, Gustave Kahn, and Catulle Mendès.

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Die Aufgaben des Lehrers. WILHELM JERUSALEM. Wien und Leipzig: Wilhelm Braümuller. 1912. Pp. xii + 392.

This, the latest volume from this many-sided and productive writer, has come, he declares, from next his heart. Entire absence of dogmatism, a fervor of conviction, and the sympathetic tone of an older colleague combine with clearness of philosophic insight and confidence of handling to make the book exceedingly stimulating. Jerusalem invites comparison with Matthias's "Praktische Pädagogik" and with Münch's "Geist des Lehramts." The first is, however, rather the critical inspector writing *vom grünen Tisch;* the latter, the university essayist grown gradually aloof; both lack Jerusalem's vitality and directness, his intimacy of appeal, and particularly his consistent psychological and sociological point of view which expresses a new emphasis in German educational writing.

Frankly taking his text from Professor Royce's "Philosophy of Loyalty" to the effect that a genuine personality may be developed only through voluntary dedication to a great and significant social task, he summons the *Oberlehrer* to the ideal interpretations of his profession. The burden of progress and achievement is laid upon no social or economic scapegoat, but directly upon the teacher himself, whose duty it is more thoroughly to spiritualize his work and to discern its peculiar possibilities and dignity. For this, two great syntheses are necessary. The first is that of scholarship with the pedagogical attitude, and here Jerusalem ably sets forth the real significance of the change which the secondary teacher has undergone during the past two decades. Paulsen's view that the *Oberlehrer* must continue as an independent investigator is emphatically rejected in terms that certainly express the belief of a majority of German teachers to-day.

"I must declare it unmistakably as my firm conviction," says Jerusalem, "that broad and intelligent assimilation of knowledge and the continual increase of positive acquisitions directly applicable in school are more important than independent production in a narrowly limited field." "The only correct conception of our professional duty is that we place science and learning at the disposal of the school." Hence "among the tasks common to every teacher the scientific study of education is the first and most important." The second synthesis is that of teacher and state official. With our rapidly increasing socialization this

has large importance even for Americans. To maintain as teacher one's indispensable freedom of action and his fruitful criticism of his superiors together with a loyal recognition of his personal subordination to the just demands of the larger whole is a delicate task as yet imperfectly realized. Further syntheses of receptivity and productivity, of many-sidedness and thoroughness, of authority and love, are discussed in a keen but optimistic vein.

For Jerusalem the modern pedagogy is wholly empirical, evolutionary, and social. A "liberal" education is, historically, simply a social demand varying in content according to circumstances. All factitious purposes aside, the task of the secondary school to-day is to train to "mental independence and moral responsibility." This end is sought through intellectual, esthetic, socio-ethical, religious, and philosophical cultivation. For the purposes of the first two elements mathematics, natural science, and philology are prescribed—the usual programme of the *gymnasium*. To ease the gathering weight of these branches Jerusalem makes the fruitful suggestion of a division into disciplinary and inspirational subjects, the pupil to be held to a strict account in the former, while in the latter responsibility devolves almost solely on the master. This incidental proposal brings Jerusalem's programme for the teacher into strong relief. A man of wide, accurate learning he already is (in Germany and Austria); he must become a man of power, a trustworthy moral guide, a sympathetic human seer. This is the central thought of the entire book.

The socio-ethical training contemplated brings the author into the most modern and suggestive phases of his subject. Leaning somewhat heavily on Foerster's "Schule und Charakter" and Scott's "Social Education," he pleads for deliverance from German educational formalism with arguments sufficiently obvious to the American, but not yet compatible with the rigorous purposes of German social organization.

As already intimated, a clear and often illuminating psychological analysis underlies the treatment throughout. It is refreshing, for example, to find *interest* defined as "nothing other than the pleasure accompanying the satisfaction of the functional needs of the mind," and to be assured that its development in instruction is a matter of the scientific application of certain quite definite principles accessible to any careful teacher, and not dependent upon a mysterious breath of personality which bloweth where it listeth. The "psychological standpoint" receives its deserved emphasis in all problems of instruction, while the very concept of liberal education is built up on the threefold aspects of knowing, feeling, and willing.

With all his progressivism the author balks at many a radical step already being vigorously agitated. Thus he opposes all relaxation of the curriculum in favor of individual election even in *Prima*, and would secure elasticity of adjustment within the class itself. He abides by tradition, likewise, in respect to the clearly questionable religious instruction offered throughout the course. It is but just to say that could it be maintained at the standard which Jerusalem sets for it, it would not be questionable—a wish which to many competent observers appears quite

out of the question however. At these and other minor points the reader may find occasion to differ, but he differs always with convictions arrived at by honest and patient investigation; the issue is never avoided. Always clear, always constructive, and usually convincing, Jerusalem has uttered an invigorating message to the secondary teacher which should reach beyond the limits of the language in which he writes.

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NEW YORK CITY.

JOURNALS AND NEW BOOKS

REVUE PHILOSOPHIQUE. June, 1913. *La position actuelle du problème de l'hérédité* (pp. 545–567): DR. S. JANKÉLÉVITCH. – The discussions of the problems of heredity are complicated by the continuity of social life, the (unconscious) influence of divergent social and political attitudes. The Neo-Darwinian and Neo-Lamarckian controversy is shot through with misunderstandings of the meanings and differences in the uses of the terms "heredity," "acquired," "innate," and of the rôle to be assigned to "environment" in the history of living beings. *Comment se maintient et se renforce la croyance* (pp. 568–592): J. M. LAHY. – Seeks to explain how man can "take the religious attitude of belief *a priori*, when daily experience contradicts at every instant the doctrines of this belief" by an analysis of tribal collective experience, the rôle of myth, emotion, etc., in primitive cults. *L'essence du phénomène social: la suggestion* (pp. 593–602): R. BRUGEILLES. – Suggestion forms the basis of explanation of social phenomena, and comprises the partial truths of the imitation theory of Tarde, the "constraint" theory, and the "concurrence of thought and activity" theory of Worms. *Un enfant apprend à lire* (pp. 603–629): E. CRAMAUSSEL. – A report, with discussion of errors of method, etc., of observations on the process of a child's learning to read (covering 170 lessons). *Analyses et comptes rendus.* F. Pillon, *L'année philosophique:* JULES DELVAILLE. Vernon Lee, *Vital Lies:* L. ARRÉAT. Paul Natrop, *Allgemeine Psychologie Nach Kritischer Methode; Erstes Buch, Objekt und Methode der Psychologie:* G. L. DUPRAT. Friedrich Boden, *Die Instinktbedingtheit der Wahrheit und Erfahrung:* HUBERT. Varia Kipiani, *Ambidextrie:* G. L. DUPRAT. Raymond Meunier, *Les sciences psychologiques; leurs méthodes et leurs applications:* G. L. DUPRAT. Gustave Monteleunis, *La jalousie:* HUBERT. *Revue des périodiques.*

REVUE DE MÉTAPHYSIQUE ET DE MORALE. July, 1913. *L'influence du moral sur le physique d'après Cabanis et Maine de Biran* (pp. 451–461): F. COLONNA D'ISTRIA. – Cabanis maintains a continuity between all the phenomena of life, so for him morality is nothing but the operation of a coordinating function, while Maine de Biran holds this continuity to be broken at a certain point where consciousness introduces liberty and will. *Les principes du calcul fonctionnel* (pp. 462–510):

M. WINTER. – A study in the principles of the evolution of science which aims at throwing into relief the essential ideas of contemporary mathematics and showing their genesis. *Le problème religieux dans la pensée contemporaine* (pp. 511–525): D. PARODI. – An introductory lecture in a series given at L'École des Hautes Études Sociales in 1911–12 by twelve prominent French philosophers. The lecture sets forth the form in which the problem of religion has regained the interest of philosophers to-day. *Sur quelques rapports des Règles de Descartes avec les Méditations* (pp. 526–636): H. HEIMSOETH. – A partial sanction for the idealistic interpretation of Descartes based on the order and the postulates of his thought. *L'École de Chicago et l'Instrumentalisme:* H. ROBET. *Questions pratiques: A propos de l'article de M. Cantecor sur le suicide: Deux idées de V. Egger:* A. LECLÈRC. *Supplément.*

Finkelstein, I. E. The Marking System in Theory and Practise. Educational Psychology Monographs, No. 10. Baltimore: Warwick and York. 1913. Pp. 88. $1.00.

Gentile, Giovanni. La Riforma della Dialettica Hegeliana. Messina: Giuseppe Principato. 1913. Pp. lx + 306. 5L.

NOTES AND NEWS

THE thirteenth annual meeting of the American Philosophical Association will be held at New Haven, Connecticut, on December 29, 30, and 31. The sessions will begin on the afternoon of the twenty-ninth. The subject for consideration in the joint session of the American Psychological and Philosophical Associations will be "The Standpoint and Method of Psychology." The Philosophical Association is this year committed to the discussion of some important problem for two sessions. The question selected for the main discussion is the problem of the "Relation of Existence and Value," including their relation both as facts and concepts, and also the "Relation of a Theory of Existence to a Theory of Value." The stating of the problem in this general way will allow members to present their more specific points of view and to participate in the discussion. Leaders for this discussion will be appointed by the Executive Committee, and announced in the programme for the meeting. It is hoped that members will prepare themselves as much as possible beforehand for the discussion, and will give the main problem adequate and careful consideration. There will be the usual opportunity for a number of papers on various important subjects, titles and abstracts of which should be sent to the Secretary, not later than December 6. Papers are limited to twenty minutes in reading, and abstracts to four hundred words. Membership blanks will be furnished on request, and should be so filled out as to give full information regarding the candidate's qualifications. They should be sent to the Secretary, Professor E. G. Spaulding, Princeton, New Jersey, by December 23.

THE New Haven meeting of the American Psychological Association will be held on December 29, 30, and 31, under the presidency of Professor Howard C. Warren. The main sessions will be held in the Yale Psycho-

logical Laboratory, in Herrick Hall. The programme goes to press on December 12, and all titles should be in the hands of the Secretary, Professor W. V. Bingham, Dartmouth College, Hanover, New Hampshire, by December 10. It is desirable that a brief abstract should accompany the title to aid the committee in arranging a coherent programme. An abstract of each paper, not exceeding four hundred words in length, will be printed in the published proceedings, and should reach the Secretary by December 20. A file of these abstracts will be available at the time of the meetings so that they may be examined by any member in advance of the reading of the papers. The request of the Secretary for samples of examination questions, mimeographed outlines, syllabi, laboratory directions, reviews, and similar aids to teaching has already met with response from several quarters. An interesting and suggestive exhibit will be assured if others will send samples of some of the materials they are using. The Secretary is authorized by the Association to arrange for the payment of transportation charges on new apparatus for research and useful charts and demonstration devices which members may be willing to display. Consignments should be shipped in care of Professor R. P. Angier, Herrick Hall, New Haven, Connecticut.

In a recent letter, Professor Ernst Haeckel, whose eightieth birthday will occur on February 16, 1914, asks that his friends, of whose intention to celebrate that anniversary he has been informed, will refrain from sending personal donations, and will, instead, send contributions to be placed at the disposal of the German Monists' Union. The development of this Union since its foundation seven years ago and the importance it has gained as an influence making for greater freedom and rationality of thought, render, he believes, its financial support desirable. It is expected that the new "Ernst-Haeckel-Fund for Monism" will constantly further the work of the Union along the lines of natural science. Professor Haeckel's heartiest thanks are sent, in advance, to all his friends and comrades, who by subscribing to this fund, will support the work of his long life. Payments should be sent to Deutsche Bank, Filiale Hamburg, for the "Ernst-Haeckel-Schatz für Monismus," or to Konto No. 7497, Hamburg. Acknowledgments of payments will appear, if desired, in *Monistisches Jahrhundert,* under "Chiffre." All correspondence and questions should be addressed to the "Ernst-Haeckel-Schatz für Monismus," 1 Klein Fontenay, Hamburg 36.

Dr. Alois Riehl, professor of philosophy at the University of Berlin, and formerly rector of the University, who recently addressed the officers and students of the department of philosophy at Columbia University, gave two lectures at Harvard University on November 17 and 18, on "Nietzsche" and "Nietzsche and Bergson."

Dr. Frederick Henke (Chicago), recently of Nanking University, has been appointed professor of philosophy at Willamette University, Oregon.

Dr. J. Frederick Dashiell (Columbia, '13) has been appointed professor of philosophy and education at Waynesburg College, Pennsylvania.

Dr. W. K. Wright has been appointed an instructor in philosophy in Cornell University.